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REPORT OF  
MOUNTAIN PINE BEETLE SITUATION IN  
RAINIER NATIONAL PARK  
FALL 1931.

by  
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### **Abstract**

The protection of pines from insects in Rainier National Park has been undertaken on the basis of preserving representatives of these trees within the park. The present policy is to protect only the developed areas.

The Longmire and White River Areas have been selected for protection because of their scenic values. Control work in these areas has been directed against the mountain pine beetle in western white pine.

During 1931 the Longmire and White River Areas were thoroughly covered by the spotting and control crews and 1030 infested trees treated either by the burning or peeling method.

A fall check of these areas indicated that the work had been very thoroughly and effectively done. Almost no reinfestation occurred in the vicinity of the treated areas and only a few more remote infested trees were found.

A thorough survey is recommended in the Longmire and White River Areas during the spring of 1932.

REPORT OF  
MOUNTAIN PINE BEETLE SITUATION IN  
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The protection of white pines of Rainier National Park against destruction by the mountain pine beetle has received the attention of the Park Service since 1927 and the Bureau of Entomology since 1929.

In October and November 1930 F. P. Keen and W. J. Buckhorn made an extensive examination of the white pine areas in the Park in order to formulate a control program for 1931. For a clearer understanding of the history of the infestation and extent and location of the pine stands the reader is referred to Keen's report. \*

It was decided to concentrate beetle control work in the more developed areas of the Park. This policy limited the work to the Longmire and White River sections, and was only possible because of the exceptionally good isolation of these basins from other infested Park timber.

Control Work of 1931

During the spring of 1931 control work against the mountain pine beetle was conducted in the Longmire and White River Areas. Control work started late in March and continued until late May. In the Longmire district a total of 506 infested western white pine trees were treated at an average cost of \$1.88 per tree. This figure includes spotting costs and some clean up work left over from last summer. The trees averaged 12.9 inches in diameter. The infested trees occurred in 16 distinct groups of from 4 to 104 trees. The burning method was used with the exception of approximately 40 trees which because of fire hazard conditions were peeled. This method of treating consisted of limbing the felled trees and bucking them into lengths which could be decked and the entire trees burned.

On the White River Area 524 infested white pines were treated. They occurred in 18 groups ranging from one to 119 trees per group. It is estimated that the control cost per tree ran higher than it did in the Longmire district. No accurate cost figures are available as approximately 200 of these trees were cut and peeled, and used for log railing along the new White River Highway.

\* Report of the Mountain Pine Beetle Situation in Rainier National Park Fall 1930.



Fall examinations of the Longwire and White River Areas showed that the control work had been thoroughly and effectively done. A number of the treated plots were examined in the vicinity of Headquarters camp at Longwire. On these areas there was found but one fifty foot snag which had been infested since the treatment in the spring. However, Chief Ranger Davis reported a few new beetle trees on upper Tahoma Creek.

An examination on the White River Area near the east entrance of the Park indicated that control work here had been thorough. Here there was an occasional tree where some reinfestation had occurred. Also District Ranger Sedegrin reported a new group of infested white pines located about two miles above the White River bridge. There were about a dozen trees in this group.

During the fall examinations timber adjacent to the infested trees both at Longwire and at White River was carefully checked over and only a few trees found. However, the groups were small and scattered and the inclement weather made visibility very poor so it is quite possible that infestations exist which could not be detected when the fall surveys were made. For this reason it is recommended that this spring careful surveys be made throughout the infested areas of last spring and that money be included in the insect control appropriation to take care of infestations that may have developed during late summer and fall.

#### Present Insect Situation

##### 1. Longwire Area:

Infested trees have been treated in this area since 1927. In the spring of 1931, 506 trees were cut and treated. This number represented all infested trees which could be located. Most of the beetle trees occurred high up on Rampart ridge, with one group on Tuntum Peak. No reinfestation occurred in the vicinity of the treated groups with the exception of a single tree. One small group of newly infested trees were found on upper Tahoma Creek. These were treated in the fall clean up work. A complete survey of the area should be made next spring.

##### 2. White River Area:

Control work on this area was first begun in 1931 when 524 white pines infested with the mountain pine beetle were treated. This included all infested trees located on the area. Most of the beetle trees occurred along White River or along the New White River Highway. An occasional reinfested tree occurred in this area and one group of about a dozen infested trees was located about two miles above the White River bridge. These trees were to have been treated in the fall clean up work. A complete survey of this area is recommended for next spring.

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### 3. Ohanapecosh Area:

This area was not examined by the writer due to the early fall snows which prevented access to it. Chief Ranger Davis reports, however, that 900 western white pine trees died as a result of the mountain pine beetle ravages during 1931. This is reported as a new infestation and as occurring in one large group but in an isolated section of the park. So far no control work has been recommended in this area because of the poor conditions of the unit and proximity to infested National Forest Areas which would have to be included in any control plan.

### 4. Cowlitz River Area:

An infested group of pine occurs on Williwakas Creek in this area. The infestation is of long standing and according to Ranger Davis does not appear to be increasing. He estimates that 450 white pine trees were killed by the mountain pine beetle in this area in 1931. This infestation is in an isolated section of the Park and is of little importance except as a possible source of danger to the Longmire area. The clean up of this area may be desirable if it is found that the Longmire area is becoming re-infested from it. For the present it is not recommended that control be extended to this area, but that funds be made available to clean it up if this is found to be necessary.

### 5. Wilderness Area:

In this section of the Park there occurs on the West Fork of White River a defoliated area of about 100 acres. This outbreak was visited by the writer in late September. The area of infested timber is composed largely of Western hemlock with a sprinkling of Mountain hemlock, Noble fir, Amabilis fir, Douglas fir, Western white pine and Alaska Cedar. All species within the area show the result of heavy defoliation but the hemlock has been most affected. In the center of the infestation the hemlock has been completely stripped while other tree species appear to be dying from the effects of lighter feeding. The area involved is located in one of the most inaccessible spots in the park. Continued snow and rain made the trip into the country especially difficult and it was possible to spend only an hour or two a day in the examination of the trees because of the time needed in getting to and from the infestation. Two separate trips were made into the area with no positive results. The examination of the defoliated area involved a thorough search for the possible cause of the damage. Trees were felled which had been completely stripped of their foliage, some that were red and some that were just turning. Under each type of injury the ground and duff were carefully searched for pupae. The moss on the stems and limbs were searched for eggs or other evidence but none was found. No larvae could be found on the foliage, and no moths were found in the area. Many of the stems of the infested trees are green and except for the loss

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of foliage have the appearance of living trees. In some cases ambrosia beetles and other secondaries insects were attacking the trees. The few white pine trees which were apparently defoliated by the insect in question have been attacked by the mountain pine beetle and have good broods of larvae in them.

It is believed that a positive determination of the insect responsible for defoliating the trees will probably have to await a summer examination when some of them can be found. It is essential that another ~~year~~ examination of the defoliated area be made next summer after the ~~spring~~ insect activity has been resumed.

#### Recommendations:

As far as is now known there are but a very few trees infested by the mountain pine beetle in the two protected areas of the Park.-- The Longmire and White River Basins. So that maintenance control on these two areas should be a very simple matter for the coming year.

The extension of control to other infested Park areas will depend upon whether any of these are designated for intensive use and can be protected at a reasonable expense. Possible control of the outbreak of a defoliator in the Wilderness Area will have to await further investigation of this insect. The treatment of the Williwakas infestation may be desirable if this is found to be a source of infestation endangering the Longmire Area.

In order to provide for a complete survey of recently treated areas, dispose of any new infestation which may be found, and provide for the clean-up of the Williwakas Creek unit if this is found necessary, it is recommended that the \$1000 estimated for the spring work of 1932 by Superintendent Tomilson ~~as necessary~~ be approved. If the control of the defoliator in the Wilderness area is found to be feasible a supplemental estimate will be required. This as well as any work in the Ohanapecosh Area will have to await further examinations and study.